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EXAMINER

NGUYEN, BRIAN D

ART UNIT PAPER NUMBER

2661

DATE MAILED: 12/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

# Office Action Summary

Application No.

09/601,737

Applicant(s)

RASANEN, JUHA

Examiner

Brian D Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on the application filed 8/7/00.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
2. The disclosure is objected to because of the following informalities: On page 4, lines 2 and 3 referring to claims 1, 15, 21, and 25. Because these claims could be changed in an amendment, the applicant is requested to replace the first paragraph on page 4 with the corresponding disclosure.

### ***Claim Objections***

3. Claims 3, 17-20, 22-24, and 28 are objected to because of the following informalities:  
  
Claim 3, "LAC" in line 4 seems to refer back to "link access control" in line 2. If this is true, it is suggested to change "link access control" to ---link access control (LAC)---.  
  
Claim 17 has the same problem as claim 3.  
  
Claim 18, line 2, "PPP links" seems to refer back to "PPP links" in line 9 of claim 15. If this is true, it is suggested to change "PPP links" to ---the PPP links---.  
  
Claim 19, line 4, "PPP links" seems to refer back to "PPP links" in line 9 of claim 15. If this is true, it is suggested to change "PPP links" to ---the PPP links---.  
  
Claim 20, line 4, "PPP subchannels" seems to refer back to "PPP subchannels" in line 11 of claim 15. If this is true, it is suggested to change "PPP subchannels" to ---the PPP subchannels---.

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Claim 22, it is suggested to change “a link access control protocol” to ---a link access control (LAC) protocol---.

Claim 23, line 5, “PPP links” seems to refer back to “PPP links” in line 9 of claim 20. If this is true, it is suggested to change “PPP links” to ---the PPP links---.

Claim 24, line 4, “PPP subchannels” seems to refer back to “PPP subchannels” in line 10 of claim 20. If this is true, it is suggested to change “PPP subchannels” to ---the PPP subchannels---.

Claim 28, line 6, “one common separate link access control” seems to mean “one common link access control”. If this is true, it is suggested to change “one common separate link access control” to ---one common link access control---.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Regarding claims 3, 17, 22, and 26-28, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

6. Claims 8, 14, 21-24, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8, line 3, “each separate LAC protocol link” is unclear if there is a separate LAC protocol link for each PPP link.

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Claim 14 recites the limitation "said subsegment" in line 2 and "the radio access network" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 21, lines 9-10, "the multilink PPP subleg" is unclear which one of the first subleg and the second subleg the applicant is referring to.

Claim 28, line 11, "the LAC protocol link" is unclear which LAC protocol link in line 2 and 6 the applicant is referring to. The claim is also unclear because one step establishing a separate LAC protocol link for each link of the multilink PPP connection and the other step is establishing one common separate LAC protocol link for each link of the multilink PPP connection.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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8. Claims 1-4, 6, 8-9, 12-18, 20-22, 24-26, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Sipila (6,327,268).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1-2, 14, Sipila discloses a mobile communication system which comprises a mobile station (MS) and an interworking function (IWF) for establishing a high-speed point-to-point data connection to a data network access point, which supports a multilink point-to-point protocol (PPP) (see col. 5, lines 4-7; col. 8, lines 14-17), the point-to-point connection comprising a first subleg between the mobile station (MS) and the interworking function (IWF) and a second multilink PPP subleg between the interworking function (IWF) and the access point, characterized in that the mobile station (MS) comprises multilink PPP protocol means for establishing at least two PPP links (see up to 32 links in col. 5, lines 4-7) with the access point through the point-to-point connection, the first subleg comprises at least two PPP subchannels for transferring each of the at least two PPP links in a dedicated PPP subchannel, the interworking function (IWF) (8 of figure 2) is arranged to adapt each PPP subchannel to the respective PPP link on the multilink PPP connection so that the PPP links are transferred transparently between the multilink protocol means of the mobile station and the access point (see figures 2 & 6).

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Regarding claim 3 Sipila discloses the RLP is used on the first subleg or on one of its segments and there is a separate LAC link and a physically separate traffic channel or traffic stream for each PPP link between the mobile station (MS) and the interworking function (IWF) or on the subsegment (see col. 5, lines 33-64; Note that ISDN comprises D-channel and B-channel).

Regarding claims 4, 6, and 8, Sipila discloses multiplexing links into one common broadband traffic channel (see col. 9, lines 13-16; col. 10, lines 9-12).

Regarding claim 9 and 12-13, Sipila discloses multiplexing links into one common LAC protocol link (see col. 9, lines 13-16; col. 10, lines 9-12; note that either or both of traffic and control channels can be multiplexed into broadband channel).

Regarding claims 15-18 and 20, claims 15-20 are mobile station claims that have substantially all the limitations of the respective system claims 1-4 and 9. Therefore, they are subject to the same rejection.

Regarding claims 21, 22, and 24, claims 21, 22, and 24 are networking function claims that have substantially all the limitations of the respective system claims 1, 3, and 9. Therefore, they are subject to the same rejection.

Regarding claims 25-26, and 29, claims 25-26 and 29 are method claims that have substantially all the limitations of the respective system claims 1 and 2. Therefore, they are subject to the same rejection.

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9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5, 7, and 10-11 are rejected under 35 U.S.C. 103(a) as being obvious over Sipila (6,327,268).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).



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Regarding claims 5, Sipila discloses the links can be separated or multiplexed into broadband channel as described in previous paragraph. Sipila does not specifically disclose the LAC links are separated and the traffic links are multiplexed. However, multiplex the control channels and/or traffic channels into broadband channels is a matter of choice. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to separate control links and multiplex the traffic links in order to meet specific needs.

Regarding claim 7, Sipila does not specifically disclose each PPP link has predetermined bit locations in the transmission frame of the broadband traffic channel. However, it is well known that when demultiplexing a multiplexed frame bit locations for each link must be known. Otherwise, the system will not be able to arrange packets from different links into their original forms.

Regarding claims 10-11, Sipila does not specifically disclose each frame of the LAC protocol link contains information from each PPP link or each frame of the LAC protocol link contains information from only one PPP link and information on the PPP link to which the information is related. However, to have the frame contains information from each PPP link or contains information from only one PPP link and information on the PPP link to which the information is related is a matter of choice. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the frame contains information from each PPP link or contains information from only one PPP link and information on the PPP link to which the information is related to meet specific needs.

Regarding claim 19, claim 19 is a mobile station claim that has substantially all the limitations of the respective system claim 5. Therefore, it is subject to the same rejection.

Regarding claim 23, claim 23 is a networking function claim that has substantially all the limitations of the respective system claim 5. Therefore, it is subject to the same rejection.

Regarding claim 27-28, claims 27-28 are method claims that have substantially all the limitations of the respective system claims 5 and 9. Therefore, they are subject to the same rejection.

11. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gavrilovich (5,771,229) in view of Maurya (6,160,808).

Regarding claims 1-4, 6, 8-9 and 12-14, Gavrilovich discloses mobile communication system in which data are transmitted over a plurality of channels (see abstract and figures 1-2). Gavrilovich does not specifically disclose the use of PPP protocol. However, the use of PPP protocol or any well known protocol is a matter of choice. Maurya discloses the technique of using the multi-link PPP protocol (see abstract; figure 6A). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the PPP protocol as taught by Maurya in the system of Gavrilovich in order to meet specific needs.

Regarding claims 5, Gavrilovich in view of Maurya discloses the links can be separated or multiplexed into broadband channel as described in previous paragraph. Gavrilovich in view of Maurya does not specifically disclose the LAC links are separated and the traffic links are multiplexed. However, multiplex the control channels and/or traffic channels into broadband channels is a matter of choice. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to separate control links and multiplex the traffic links in order to meet specific needs.

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Regarding claim 7, Gavrilovich in view of Maurya does not specifically disclose each PPP link has predetermined bit locations in the transmission frame of the broadband traffic channel. However, it is well known that when demultiplexing a multiplexed frame bit locations for each link must be known. Otherwise, the system will not be able to arrange packets from different links into their original forms.

Regarding claims 10-11, Gavrilovich in view of Maurya does not specifically disclose each frame of the LAC protocol link contains information from each PPP link or each frame of the LAC protocol link contains information from only one PPP link and information on the PPP link to which the information is related. However, to have the frame contains information from each PPP link or contains information from only one PPP link and information on the PPP link to which the information is related is a matter of choice. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the frame contains information from each PPP link or contains information from only one PPP link and information on the PPP link to which the information is related to meet specific needs.

Regarding claims 15-20, claims 15-20 are mobile station claims that have substantially all the limitations of the respective system claims 1-14. Therefore, they are subject to the same rejection.

Regarding claims 21-24, claims 21-24 are networking function claims that have substantially all the limitations of the respective system claims 1-14. Therefore, they are subject to the same rejection.

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Regarding claims 25-29, claims 25-29 are method claims that have substantially all the limitations of the respective system claims 1-14. Therefore, they are subject to the same rejection.

*Conclusion*

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sicher (5,936,948), Ahopelto et al (5,970,059), Ahuja et al (6,222,837), and Rasanen (5,966,374), Rasanen (6,594,486) are all cited to show transmitting of data over multi-channel which are considered pertinent to the claimed invention.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D Nguyen whose telephone number is (703) 305-5133.

The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.



Brian Nguyen  
12/1/03